

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 89-097
NPDES NO. CA0006751

REISSUING WASTE DISCHARGE REQUIREMENTS FOR:

BERNARDO WATER SOFTENING PLANT
ALAMEDA COUNTY WATER DISTRICT
FREMONT, ALAMEDA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter the Board) finds that:

1. Alameda County Water District, hereinafter Discharger, submitted a report of waste discharge dated March 14, 1989 for reissuance of NPDES Permit No. CA0006751 to continue the discharge of wastewater from its M. J. Bernardo Water Softening Plant.
2. The Discharger presently discharges approximately 0.1 million gallons per day of spent brine softening regeneration wastewater from its plant at the corner of Peralta Boulevard and Mowry Avenue in Fremont. The discharge is at a rate of about 1,000 gallons per minute and under average conditions, there are four 24-minute periods of discharge per day. The discharge is through a pipeline which runs along Mowry Avenue and then empties at either of two locations into Alameda County Flood Control District's open channels which flow to Mowry Slough at the westerly end of Mowry Avenue at a point approximately three miles upstream from the slough's confluence with South San Francisco Bay (Latitude 37 deg., 30 min., 25 sec.; Longitude 122 deg., 00 min., 40 sec.). Before discharge to Mowry Slough, the discharge is commingled with overflow water, equivalent to softening plant effluent, at a dilution ratio of about 14:1 or with either of the Farwell or Bellflower aquifer reclamation wells at a dilution ratio of at least 20 to 1. The discharge from these wells is saline intrusion water being pumped out and returned to the Bay. The wells are operated by the Discharger and are under a separate permit to discharge.
3. The discharge is presently subject to NPDES Permit CA0006751 (Order No. 84-23, adopted on June 20, 1984) which allows discharge into San Francisco Bay.
4. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986, and the State Water Resources Control Board (SWRCB) approved it on May 21, 1987.
5. The Basin Plan contains water quality objectives for South San Francisco Bay and contiguous waters. The beneficial uses of South San Francisco Bay and contiguous water bodies are:

Water Contact Recreation
Non-contact Water Recreation
Wildlife Habitat
Preservation of Rare and Endangered Species
Estuarine Habitat

Fish Migration and Spawning
Industrial Service Supply
Shellfish Harvesting
Navigation
Commercial and Sport Fishing

6. The Basin Plan prohibits the discharge of wastewater having particular characteristics of concern to beneficial uses at any point where the wastewater does not receive a minimum initial dilution of at least 10:1 or into any dead-end slough, or to San Francisco Bay south of the Dumbarton Bridge. This discharge complies with the three prohibitions because it does not contain particular characteristics of concern to beneficial uses.
7. This Order serves as an NPDES Permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.
8. The Discharger and interested agencies and persons have been notified of the Board's intent to revise and reissue requirements for the existing discharge and have been provided with the opportunity for a public hearing and opportunity to submit their written views and recommendations.
9. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act as amended and regulations and guidelines adopted thereunder, shall comply with the following:

A. Effluent Limitations

1. The effluent shall be limited to brine discharge resulting from the water softening process and the dilution water described in Finding 2 of this Order and no additional pollutants shall be added.
2. Effluent discharged shall not exceed the following limits:

<u>Constituents</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
Total Suspended Solids	mg/l	30	45

3. The pH of the discharge shall not exceed 8.5 nor be less than 6.5.
4. The survival of test organisms acceptable to the Executive Officer in 96-hour bioassays of the effluent shall achieve a median of 90% survival for three consecutive samples and a 90 percentile value of not less than 70% survival based on the ten most recent consecutive samples.

B. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:
 - a. Floating, suspended, or deposited macroscopic particulated matter or foam;
 - b. Bottom deposits or aquatic growths;
 - c. Alteration of temperature, turbidity, taste, odor, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
 - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:
 - a. Dissolved oxygen 5.0 mg/l minimum. Median of any three consecutive months shall not be less than 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
 - b. Dissolved sulfide 0.1 mg/l maximum
 - c. pH Variation from natural ambient pH by more than 0.5 pH units.
 - d. Un-ionized ammonia 0.025 mg/l as N Annual Median
0.4 mg/l as N Maximum
3. The discharger shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

C. Provisions

1. Compliance with Section A of this Order may be demonstrated after dilution of the waste prior to discharge to receiving water. The


discharger shall notify the Board in advance of any proposed change in dilution water from that described in Finding 2 of this Order.

2. The requirements prescribed by this Order supersede the requirements prescribed by Order No. 84-23. Order No. 84-23 is hereby rescinded.
3. Where effluent concentration limitations in mg/l or ug/l are contained in this permit, the following mass emission limitations shall also apply:

Mass Emission Limit (in lbs/day or kg/day) = Concentration Limit in mg/l x (8.34 or 3.79) x Actual Flow in mgd averaged over the time interval to which the limit applies.

4. The Discharger shall comply with all sections of this Order immediately upon adoption.
5. The Discharger shall comply with the attached self-monitoring program. The Executive Officer may make minor amendments to it pursuant to federal regulations (40 CFR 122.63).
6. The Discharger shall comply with all items of the attached "Standard Provisions and Reporting Requirements," dated December, 1986 except Items A.6, A.9, A.11, A.12, A.18, B.2, B.3, C.8 and C.11.
7. This Order expires on June 21, 1994. The Discharger must file a Report of Waste Discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.
8. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after the date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Steven R. Ritchie, Executive Officer do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on June 21, 1989.


STEVEN R. RITCHIE
Executive Officer

Attachments:

Standard Provisions & Reporting
Requirements, December 1986
Self-Monitoring Program

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

BERNARDO WATER SOFTENING PLANT

ALAMEDA COUNTY WATER DISTRICT

FREMONT, ALAMEDA COUNTY

NPDES NO. CA 0006751

ORDER NO. 89-097

CONSISTS OF

PART A, dated December 1986

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. EFFLUENT

<u>Station</u>	<u>Description</u>
*E-1	At any point in the brine discharge pipeline from the water softening plant between the point of discharge and the point at which all waste tributary to that outfall is present. This point of sampling may include other waste discharges used for the purpose of diluting the softening plant's discharge.

*A sketch shall accompany each self-monitoring report showing the location of effluent sampling station E-1 and indicating the source of dilution water used.

II. SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSIS

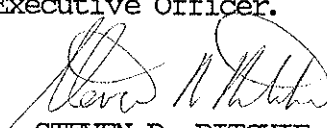
A. The schedule of sampling and analysis shall be that given as Table I.

III. MODIFICATIONS OF PART "A", DATED 12/86

- A. Exclusions: Does not include the following paragraphs of Part A: Paragraphs D.1, D.2.g, D.2.h, D.3, D.4, D.5, E.1, E.3, E.4, F.3, F.4, F.5, G.4.c, and G.4.e.
- B. Part A, paragraph G.4 shall be modified to: "Written reports shall be filed regularly for each calendar quarter by the fifteenth day of the month following the end of each calendar quarter..."

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in the Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 89-097.
2. Is effective on the date shown below.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the Discharger and revisions will be ordered by the Executive Officer.


STEVEN R. RITCHIE
Executive Officer

Effective Date 6/21/89

Attachment: Table I

TABLE I
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSES

NPDES NO. CA0006751
ORDER NO. 89-097

SAMPLING STATIONS	E-1
TYPE OF SAMPLES	C
Flow Rate (mgd) ⁽¹⁾	D
Fish Toxicity (% survival) ⁽²⁾	M
Total Suspended Solids (mg/l and kg/day)	W
pH (units)	W

LEGEND FOR TABLE

C = 24-hour composite sample
D = Daily
M = Once each month
W = Once each week

- (1) Indicate both brine flow and total flow (including dilution water).
- (2) Compliance with the effluent toxicity requirement shall be determined by performing static renewal (using a new 24-hour composite sample for each day of the four day test) bioassays using two test species. One shall be three-spine stickleback, and the other shall be either rainbow trout, fathead minnow, silverside, english sole, or sanddab. The Executive Officer may consider dropping the static renewal and the two test species requirements to a 96-hour static test using one test species six months after Order No. 89-097 is adopted and/or to reduce the bioassay monitoring frequency.